DETAILED ACTION

Election/Restrictions

1. This action is in response to an election from a restriction requirement filed on November 29, 2007 Election was made **with** traverse in the reply filed on November 29, 2007. There are eleven claims pending and under consideration. Claims 10, 12, 14, and 15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. This is the first action on the merits. The application concerns 6-(2-fluorophenyl)triazolo-pyrimidines, method for producing them, their use for controlling parasitic fungi and agents containing the same.

The applicants argue that Pees, et. al. (U.S. 6,117,876) does not break the unity of invention requirement. Claim 1 of Pees et. al. Claims a triazolopyrimidine with a 2,4,6-trifluorophenyl in the 6-position, an alkylated nitrogen in the 7-postiion, and a halogen group in the 5-position. The use for these compounds and compositions is that of a potential fungicide. The current application also teaches a triazolopyrimidine with a 2,4,6-trifluorophenyl in the 6-position, and a halogen group in the 5-position. The use for these compounds and compositions is also of a potential fungicide, with the only difference being an alkyl group instead of a halo group in the 5-position. Since the replacement of a halogen with an alkyl group does not alter the activity of the triazolopyrimidine as a fungicidal agent, there is no special technical feature at this point. Applicants have failed to show a “special technical feature” of their own

compounds and compositions in comparison to the prior art, thus there is no "unity of invention" of the claims. This argument is not found persuasive.

Secondly, the applicants argue that Group I should be recombined with Group V. If there was "unity of invention" within this application, this would be a valid argument, however as just stated above, there "unity of invention" has been broken and therefore, the grouping of these claims is proper. This argument is also not found persuasive.

Thirdly, applicants request that Group I should be rejoined with Group IV. Group IV covers the claims involving a "seed". The groups should not be examined together because as just explained previously, there is no special technical feature of the compound or composition of formula I. Claim 14 is not so linked as to form a single inventive concept. The claim is so diverse in scope and requires a separate search and raises different issues of patentability. In this instance, one of the groups is directed towards "a seed." A seed is a composition which is not "closely related" to the compound of Claim 1.

Finally, applicants traverse the request for a species election. Examiner would like to inform applicants that a request for a species election is merely used as a starting point for the examiner in his search. If the species is deemed allowable other species within the claims will be searched, not just the lone species elected. Therefore, this argument is not found persuasive.

Applicants have asked that a possible rejoinder occur with the process claims of the current application. Examiner acknowledges that if compound or composition

claims are found allowable during the examination process, a method claim and a process claim will be rejoined.

The restriction requirement is deemed proper and therefore made **FINAL**.

Priority

2. This application is a non-provisional application 10/594,738, filed on September 29, 2006 and claims foreign priority to German Application No. 102004016082.1, filed on July 30, 2004. Acknowledgment is made of applicant's claim for priority under 35 U.S.C. 119(a)-(d) based upon an application filed in Germany on July 30, 2004. A claim for priority under 35 U.S.C. 119(a)-(d) cannot be based on said application, since the United States application was filed more than twelve months thereafter.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The

disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text. Examiner suggests removing the “title” of the application from the “abstract of the disclosure”.

5. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase “Not Applicable” should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
(f) BACKGROUND OF THE INVENTION.
    (1) Field of the Invention.
    (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A “Sequence Listing” is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required “Sequence Listing” is not submitted as an electronic document on compact disc).

6. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any of the errors of which applicant may become aware of in the specification.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. The claimed invention is directed to non-statutory subject matter. Claim 11 recites, "A compound of the Formula IV ***and*** V:" An applicant may obtain "a" patent according to U.S.C. 101 and therefore the terminology of "and" in claim 11 defines more than one invention. Examiner recommends changing the word "and" to "or". Appropriate correction is necessary.

Claim Rejections - 35 USC § 112, 2nd

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 1-9, and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. At the end of Claim 1, the term, "L^2 is hydrogen, is, if L^1 is fluorine, also fluorine;" is vague and indefinite. Examiner has difficulty determining whether this means L^2 can be fluorine ***or*** hydrogen when L^1 is fluorine", or whether "L^2 can be ***only*** fluorine when L^1

is fluorine." Examiner suggests applicants rewrite this portion of the claim to make it clear and concise as to applicants intended use. Examiner will examine the rest of the claims under the assumption that L^2 can be fluorine ***or*** hydrogen when L^1 is fluorine.

9. Claims 2-9 recite the limitation "The compound of the Formula I…" in the first line of the claims. Claim 1 recites, "A 6-phenyltriazolopyrimidine of the Formula I...". There is insufficient antecedent basis for this limitation in the claim. Examiner recommends changing Claim 1 to read, "A compound of the Formula I…"

10. Claim 11 recites the limitation "A compound of ***the*** Formula IV and V:" Claim 11 does not depend on any other claims and claim 11 itself does not define a Formula IV or a Formula V. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is necessary.

Claim Rejections - 35 USC § 102

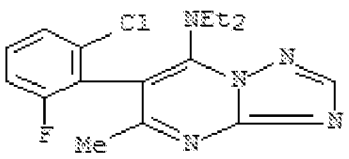
11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

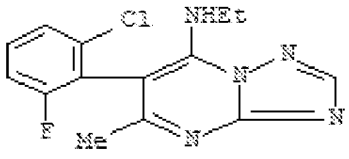
12. A person shall be entitled to a patent unless –

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

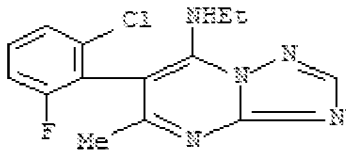
13. Claims 1, 4, and 13 rejected under 35 U.S.C. 102(b) as being anticipated by Pfrengle, et. al. US 5,994,360. The prior art describes the compounds 6-(2-chloro-6-fluorophenyl)-N,N-diethyl-[1,2,4]triazolo[1,5-a]pyrimidin-7-amine and 6-(2-chloro-6-fluorophenyl)-N-[1,2,4]triazolo[1,5-a]pyrimidin-7-amine which is seen in Column 5, last

paragraph of the patent. They have registry numbers of 220482-11-1 and 220482-12-2 and can be seen below:

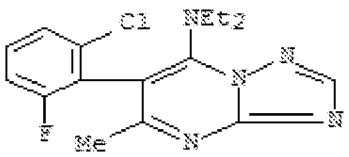


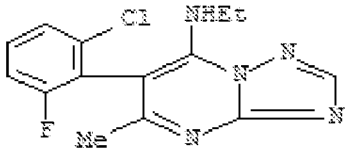


14. Claims 1, 4, and 13 rejected under 35 U.S.C. 102(b) as being anticipated by Pfrengle, et. al. WO200202563. The prior art describes the compound 6-(2-chloro-6-fluorophenyl)-N-[1,2,4]triazolo[1,5-a]pyrimidin-7-amine which is seen as compound 116 on page 152 of the specification of he prior art. It has a registry number of 220482-12-2 and can be seen below:



15. Claims 1, 4, and 13 rejected under 35 U.S.C. 102(b) as being anticipated by Pfrengle, et. al. US 5,994,360. The prior art describes the compounds 6-(2-chloro-6-fluorophenyl)-N,N-diethyl-[1,2,4]triazolo[1,5-a]pyrimidin-7-amine and 6-(2-chloro-6-fluorophenyl)-N-[1,2,4]triazolo[1,5-a]pyrimidin-7-amine which is seen as compounds 5 and 6 in Table 1 on page 11 of the translated “detailed description” portion of the specification. They have registry numbers of 220482-11-1 and 220482-12-2 and can be seen on the following page:





Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

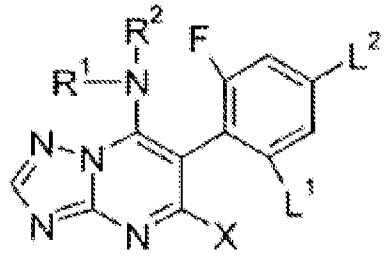
> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

17. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

18. Claims 1-9, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pfrengle, et. al. (US 5,994,360) in view of *Graver Tank & Mfg. Co. v. The Linde Air Products Co*, (USSC 1950) 339 US 695, 85 USPQ 328. The current application relates to 6-(2-fluorophenyl)triazolo-pyrimidines, method for producing them, their use for controlling parasitic fungi and agents containing the same.

In this application there is the presence of a triazolopyrimidine compound with the general formula I:



where L^1 can be chlorine or fluorine, L^2 can be hydrogen of fluorine, X can be alkyl and R^1 and R^2 can be a variety of Markush groups.

The patent reference teaches a group of compounds which are similar in scope to the current application. Within Pfrengle et. al. almost identical triazolopyrimidine analogs are prepared. These compounds are identical to the current application but for one term. The current application does not allow R^1 and R^2 to form a 4-methylpiperidinyl ring. The purpose is to find alternate active triazolopyrimidines which act as fungicidal compounds and compositions. Pfrengle et. al. has an identical core structure to the current patent application and also teaches triazolopyrimidines for use as fungicides.

Pfengle et. al. teaches a triazolopyrimidine with the same substituents as Pfrengle but for the R^1 and R^2 groups. The ring system present in the current application can be a 5 to 8-membered nitrogen containing ring, but specifically excludes a 4-methylpiperidinyl ring.

The court decision of Graver Tank teaches that the important factor in determining a test for equivalency in a prior art document is whether a person who is reasonably skilled in the art would recognize the equivalency. Thus, the test of whether the

substitution of equivalent materials is patentable invention is whether the substitution was obvious to one skilled in the art. *Ex parte Shelton* (POBA 1940) 49 USPQ 36; *Ex parte Scrutchfield* (POBA 1944) 66 USPQ 368; *Ex parte Manor* (POBA **1945)** 71 USPQ 271; *Ex parte Fein* (POBA 1948) 81 USPQ 73; *Ex parte Ancrum* (POBA 1951) 91 USPQ 301. *In re Mercier* (CCPA 1975) 515 F2d 1161, 185 USPQ 744.

Relating the information from Graver Tank to Pfengle et. al. publication, it would have been obvious for a person of ordinary skill in the art to try taking the nitrogen and its R^1 and R^2 groups so as to form alternate nitrogen containing ring systems in the same position. Piperidine, pyrrolidine, piperazine and various other heterocyclic rings are well known in the chemical arts to have similar properties and frequently are substituted, one for the other in an attempt to enhance activity of a compound or composition. In view of the numerous chemical property similarities between 4-methylpiperidinyl, pyrrolidinyl, and N-methylpiperazinyl, the skilled artisan would indeed be motivated to substitute one ring system for another as applicant has done.

It would have been obvious to one skilled in the arts at the time of the invention to be motivated to replace the 4methylpiperidinyl ring with a pyrrolidinyl or N-methylpiperazinyl ring moiety. Pfrengle et. al. shows triazolopyrimidine derivatives with a 6-membered heterocyclic ring, and Graver Tank shows that attempting to replace that ring with a 5-memebered nitrogen containing ring or a 6-memebered 2-nitrogen containing ring such as methylpiperazinyl in the R^1 and R^2 position would be equivalent, and thus the claims are obvious in light of the prior art.

Conclusion

19. Claims 1-9, 11, and 13 are rejected.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey H. Murray whose telephone number is (571) 272-9023. The examiner can normally be reached on Mon.-Thurs. 7:30-6pm EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. James O. Wilson can be reached at 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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